

CLAIMS

1. System for dispensing a substance, comprising:

- a compressible container for a stock of substance that is to be dispensed, which container has an outlet member for dispensing substance from the container,
- a dispensing device for the metered dispensing of substance from the container, which device comprises:

- a housing having a chamber for accommodating a compressible container, which chamber has a substantially vertically extending peripheral wall and an opening at the top side for placing the container into the chamber from above,
- a counter-supporting member for the top side of the container, which counter-supporting member can be placed over the opening at the top side of the chamber after the container has been placed into the chamber,
- a displaceable pressure-exerting member which extends as a base which can be moved up and down in the chamber and is designed to act on the container placed in the chamber,
- drive means for the pressure-exerting member, such that the substance is dispensed from the container through compression of the container between the counter-supporting member and the pressure-exerting member moving upwards in the direction of the counter-supporting member.

2. System according to claim 1, which comprises a dispensing passage member which forms a dispensing passage for the substance, the dispensing passage

- member being provided in the vicinity of the top side of the chamber of the dispensing device, and the dispensing passage preferably forming a downwardly facing dispensing mouthpiece.

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3. System according to claim 2, in which the dispensing passage member is a loose component which can be coupled to the outlet member of the container.
5. 4. System according to claim 3, in which the dispensing passage member is formed from a single piece of plastic as a flexible tube having a hard end part to couple the dispensing passage member to the outlet member of the container.
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5. System according to claim 3 or 4, in which the dispensing device is provided with fixing means for fixing the dispensing passage member, which has already been coupled to the container, with respect to the
15 housing.
6. System according to one or more of the preceding claims, in which the housing, next to the chamber for accommodating the container, has a vertical chamber for
20 accommodating a drive mechanism.
7. System according to claim 6, in which the peripheral wall of the chamber for accommodating the container is provided with a vertical slot which forms
25 a passage to the other chamber, the pressure-exerting member having a connecting element which extends through the said slot and into the other chamber, thereby connecting the pressure-exerting member to the drive means.
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8. System according to claim 6, in which sealing means are provided for sealing off the passage slot, in such a manner that the container does not move into the passage slot as it is compressed.
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9. System according to claim 7, in which a sealing tape is provided, sealing off the slot in the region above the pressure-exerting member so as to prevent the compressible container from entering the said slot.

10. System according to one or more of the preceding claims, in which the counter-supporting member is a lid which can be fixed to the housing using suitable locking means.
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11. System according to claim 10, in which the lid is pivotably attached to the housing.
- 10 12. System according to one or more of the preceding claims, in which the drive means comprise a hand-driven mechanism.
- 15 13. System according to claim 12, in which the drive means comprise an actuating handle which can be pivoted over an angle range, in such a manner that a portion of substance is dispensed on each actuating movement.
- 20 14. System according to claim 13, in which the housing has a stationary pivot bearing for the actuating handle, preferably in the vicinity of the top side of the housing.
- 25 15. System according to claim 14, in which the drive means comprise a carrier which is connected to the pressure-exerting member and is guided such that it can move vertically with respect to the housing, which carrier can in each case be coupled to the pivoting handle in such a manner that as a result of actuation 30 of the pivoting handle the carrier is in each case moved a distance upwards with respect to the housing.
- 35 16. System according to claim 15, in which the actuating handle is coupled to a rod-like drawing element, and in which the carrier is provided with a first tilting plate for producing the coupling between the drawing element and the carrier when the actuating handle is actuated.

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17. System according to claim 15 or 16, in which the drive means also comprise a stationary guide element to which the carrier can be coupled, in such a manner that the carrier, when it is decoupled from the actuating handle, is held in place by the stationary guide element.

18. System according to claim 16, in which the stationary guide element comprises a rod-like element, and in which the carrier is provided with a second tilting plate for producing the coupling between the stationary rod-like element and the carrier.

19. System according to one or more of claims 12-18, in which the drive means comprise a pressure-reducing mechanism, in order to move the pressure-exerting member a small distance back at the end of the dispensing of substance, in order to reduce the pressure in the container.

20. System according to claim 19, to the extent that it is dependent on claim 18, in which the second tilting plate is fitted resiliently to the carrier, in such a manner that the carrier, at the instant at which the tilting plate engages on the stationary rod-like element, is able to drop downwards by a distance which is such that the pressure in the container is reduced.

21. System according to claim 19, to the extent that it is dependent on claim 18, in which the second tilting plate is shaped in such a manner that at a defined minimum tilting angle of the tilting plate with respect to the stationary rod-like element it is coupled to the latter, which minimum tilting angle is reached when the carrier has dropped a certain distance downwards.

22. System according to claim 13, in which the actuating handle has an associated pivot bearing which

is guided in a vertically moveable manner with respect to the housing, in such a manner that as a result of actuation of the pivoting handle the pivot bearing is in each case moved a distance upwards with respect to 5 the housing.

23. System according to claim 2, in which a valve, preferably a self-closing valve, is provided for closing off the dispensing passage.

10 24. System according to claim 2, in which the dispensing passage member comprises a flexible hose-like element which forms the dispensing passage.

15 25. System according to claims 23 and 24, in which the device is provided with a squeezing-shut means for locally squeezing the flexible hose-like element shut, for example a squeezing-shut means which is under spring pressure.

20 26. System according to claim 2, in which an actively actuatable valve is provided for closing off the dispensing passage, which valve is coupled to the drive means of the pressure-exerting member in such a manner 25 that the valve is actively opened by the drive means when the pressure-exerting member is driven in order to compress the container.

27. System according to claim 26, in which the 30 actively actuatable valve is provided with a timing mechanism which closes the opened valve after a predetermined time.

28. System according to claim 26 or 27, in which the 35 actively actuatable valve can be actuated by the drive means for the pressure-exerting member, in such a manner that the valve is opened just before the pressure-exerting member is driven.

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29. System according to claim 2, in which the dispensing passage member is integral with the dispensing device, so that the container can be coupled to the dispensing passage member accommodated in the 5 dispensing device.

30. System according to claim 24, in which compression means are present for deforming the dispensing passage in such a manner that the substance in the dispensing 10 passage is forced outwards.

31. System according to claim 30, in which the compression means comprise a compression member which is designed, during dispensing of substance, to 15 compress the dispensing passage on a defined compression region and to displace the compression region over the dispensing passage towards the dispensing mouthpiece.

20 32. System according to claim 30 or 31, in which the compression means are coupled to the drive means of the pressure-exerting member.

25 33. System according to one or more of the preceding claims, in which the container is a pouch.

34. System according to claim 33, in which on the inner side of the pouch a substantially annular outlet opening is arranged with an insertion opening for a 30 dispensing passage member.

35. System according to claim 34, in which the counter-supporting member has a wall surface which faces the pressure-exerting member and is substantially complementary to the surface of the pressure-exerting member located opposite, in such a manner that the outlet member of the pouch, as seen in the pressure-exerting direction, is recessed with respect to the said wall surface of the counter-supporting member, so

that the pouch can be emptied by pressure to the maximum possible extent.

36. System according to one or more of the preceding
5 claims, in which the pressure-exerting member is provided with a recess, preferably arranged in the vicinity of the peripheral of the pressure-exerting member, for receiving deformed, for example crumpled or folded, container material during the compression of
10 the container.

37. System according to one or more of the preceding claims, in which the substantially vertically extending peripheral wall of the housing in the chamber has a suitable roughness, so that there is friction between the container and the peripheral wall sufficient to ensure that the deformation of the container occurs only at the pressure-exerting member.
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20 38. Dispensing device as set forth in one or more of the preceding claims.

39. Compressible container as set forth in one or more of the preceding claims.